

For multiple defective distant, near, and intermediate visual acuity when unifocal glasses or contact lenses are used and correct all, the appropriate limitation is:

HOLDER SHALL WEAR CORRECTIVE LENSES

For multiple vision defects involving distance and/or near and/or intermediate visual acuity when more than one set of lenses is required to correct for all vision defects, the appropriate limitation is:

HOLDER SHALL WEAR LENSES THAT CORRECT FOR DISTANT VISION AND POSSESS GLASSES THAT CORRECT FOR NEAR AND INTERMEDIATE VISION

### ITEM 52. Color Vision

(Updated 10/27/2021)

52. Color Vision	
<input type="checkbox"/>	Pass
<input type="checkbox"/>	Fail

### I. Code of Federal Regulations

#### First- and Second-Classes: 14 CFR 67.103(c) and 67.203(c)

(c) Color vision: Ability to perceive those colors necessary for the safe performance of airman duties.

#### Third-Class: 14 CFR 67.303(c)

(c) Color vision: Ability to perceive those colors necessary for the safe performance of airman duties.

### II. Examination Equipment and Techniques

**TESTS APPROVED FOR AIRMEN ARE NOT ALL ACCEPTABLE FOR AIR TRAFFIC CONTROLLERS** (ATCS - FAA employee 2152 series and contract tower air traffic controllers). For ATCS color vision criteria, see Acceptable Test Instruments for Color Vision Screening of ATCS chart at the end of this section or contact a Regional Flight Surgeon.

Note: If the airman fails acceptable color vision tests, then obtains an LOE or SODA - check fail and add airman has LOE. If they pass any acceptable color vision test - mark pass.

52. Ok Color Vision:  Pass  Fail

52. Color Vision

Fail

a/m has LOE

The following equipment and techniques apply **TO AIRMEN ONLY**:

EQUIPMENT	TEST	EDITION	PLATES
Pseudoisochromatic plates	Test book should be held 30" from applicant Plates should be illuminated by at least 20' candles, preferably by a Macbeth Easel Lamp or a Verilux True Color Light (F15T8VLX) Only three seconds are allowed for the applicant to interpret and respond to a given plate		
American Optical Company [AOC]		1965	1-15
AOC-HRR		2 <sup>nd</sup>	1-11
Richmond-HRR		4 <sup>th</sup>	5-24
Dvorine		2 <sup>nd</sup>	1-15
Ishihara		14 Plate	1-11
		24 Plate	1-15
		38 Plate	1-21
Richmond, 15-plates		1983	1-15

Acceptable Substitutes: (May be used following the directions accompanying the instruments) Farnsworth Lantern; OPTEC 900 Color Vision Test; Keystone Orthoscope; Keystone Telebinocular; OPTEC 2000 Vision Tester (Model Nos. 2000 PM, 2000 PAME, and 2000 PI) - Tester MUST contain 2000-010 FAR color perception PIP plate to be approved; OPTEC 2500; Titmus Vision Tester; Titmus i400.

### III. Aerospace Medical Disposition

**TESTS APPROVED FOR AIRMEN ARE NOT ALL ACCEPTABLE FOR AIR TRAFFIC CONTROLLERS** (ATCS - FAA employee 2152 series and contract tower air traffic controllers). For ATCS color vision criteria, see Acceptable Test Instruments for Color Vision Screening of ATCS chart at the end of this section or contact a Regional Flight Surgeon.

The following criteria apply **TO AIRMEN ONLY**:

An applicant meets the color vision standard if he/she passes any of the color vision tests listed in Examination Techniques, Item 52. Color Vision. If an applicant fails any of these tests, inform the applicant of the option of taking any of the other acceptable color vision tests listed in Item 52. Color Vision Examination Equipment and Techniques before requesting the Specialized Operational Medical Tests in Section D below.

**Inform the applicant that if he/she takes and fails any component of the Specialized Operational Medical Tests in Section D, then he/she will not be permitted to take any of the remaining listed office-based color vision tests in Examination Techniques, Item 52. Color Vision as an attempt to remove any color vision limits or restrictions on their airman medical certificate.** That pathway is no longer an option to the airman, and no new result will be considered.

An applicant does not meet the color vision standard if testing reveals:

A. All Classes

1. AOC (1965 edition) pseudoisochromatic plates: seven or more errors on plates 1-15.
2. AOC-HRR (second edition): Any error in test plates 7-11. Because the first 4 plates in the test book are for demonstration only, test plate 7 is actually the eleventh plate in the book. (See instruction booklet.)
3. Dvorine pseudoisochromatic plates (second edition, 15 plates): seven or more errors on plates 1-15.
4. Ishihara pseudoisochromatic plates: Concise 14-plate edition: six or more errors on plates 1-11; the 24-plate edition: seven or more errors on plates 1-15; the 38-plate edition: nine or more errors on plates 1-21.
5. Richmond (1983 edition) pseudoisochromatic plates: seven or more errors on plates 1-15.
6. OPTEC 900 Vision Tester and Farnsworth Lantern test: an average of more than one error per series of nine color pairs in series 2 and 3. (See instruction booklet.)
7. Titmus Vision Tester, Titmus i400, OPTEC 2000 Vision Tester, Keystone Orthoscope, or Keystone View Telebinocular: any errors in the six plates.
8. Richmond-HRR, 4<sup>th</sup> edition: two or more errors on plates 5-24. Plates 1-4 are for demonstration only; plates 5-10 are screening plates; and plates 11-24 are diagnostic plates.

B. Certificate Limitation. If an applicant fails to meet the color vision standard as interpreted above, but is otherwise qualified, the AME must issue a medical certificate bearing the limitation:

NOT VALID FOR NIGHT FLYING OR BY COLOR SIGNAL CONTROL

C. The color vision screening tests above (Section A) are not to be used for the purpose of removing color vision limits/restrictions from medical certificates of airmen who have failed the Specialized Operational Medical Tests below (Section D). See bold paragraph in the introduction of this section (above).

D. Specialized Operational Medical Tests for Applicants Who Do Not Meet the Standard. Applicants who fail the color vision screening test as listed, but desire an airman medical certificate without the color vision limitation, may be given, upon request, an opportunity to take and pass additional operational color perception tests. If the airman passes the operational color vision perception test(s), then he/she will be issued a Letter of Evidence (LOE).

- The operational tests are determined by the class of medical certificate requested. The request should be in writing and directed to AMCD or RFS. See NOTE for description of the operational color perception tests.

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- Applicants for a third-class medical certificate need only take the Operational Color Vision Test (OCVT).
- The applicant is permitted to take the OCVT only once during the day. If the applicant fails, he/she may request to take the OCVT at night. If the applicant elects to take the OCVT at night, he/she may take it only once.
- For an upgrade to first- or second-class medical certificate, the applicant must first pass the OCVT during daylight and then pass the color vision Medical Flight Test (MFT). If the applicant fails the OCVT during the day, he/she will not be allowed to apply for an upgrade to First- or Second-Class certificate. If the applicant fails the color vision MFT, he/she is not permitted to upgrade to a first- or second-class certificate.

E. An LOE may restrict an applicant to a third-class medical certificate. Airmen shall not be issued a medical certificate of higher class than indicated on the LOE. Exercise care in reviewing an LOE before issuing a medical certificate to an airman.

F. Color Vision Correcting Lens (e.g. X-Chrom). Such lenses are unacceptable to the FAA as a means for correcting a pilot's color vision deficiencies.

G. Any tests not specifically listed above are unacceptable methods of testing for FAA medical certificate. Examples of unacceptable tests include, but are not limited to, the OPTEC 5000 Vision Tester (color vision portion), "Farnsworth Lantern *Flashlight*," "yarn tests," and AME-administered aviation Signal Light Gun test (AME office use is prohibited). **Web-based color vision applications, downloaded, or printed versions of color vision tests are also prohibited.** AMEs must use actual and specific color vision plates and testing machinery for applicant evaluations.

**NOTE:** An applicant for a third-class airman medical certificate who has defective color vision and desires an airman medical certificate without the color vision limitation must demonstrate the ability to pass an Operational Color Vision Test (OCVT) during the day. The OCVT consists of the following:

1. A Signal Light Test (SLT): Identify in a timely manner aviation red, green, and white
2. Aeronautical chart reading: Read and correctly interpret in a timely manner aeronautical charts, including print in various sizes, colors, and typefaces; conventional markings in several colors; and, terrain colors

**An applicant for a first- or second- class airman medical certificate who has defective color vision and desires an airman medical certificate without the color vision limitation must first demonstrate the ability to pass the OCVT during the day (as above) and then must pass a color vision Medical Flight Test (MFT). The color vision MFT is performed in the aircraft, including in-flight testing. It consists of the following:**

1. Read and correctly interpret in a timely manner aviation instruments or displays
2. Recognize terrain and obstructions in a timely manner

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3. Visually identify in a timely manner the location, color, and significance of aeronautical lights such as, but not limited to, lights of other aircraft in the vicinity, runway lighting systems, etc.

Applicants who take and pass both the OCVT during the day and the color vision MFT will be given a letter of evidence (LOE) valid for all classes of medical certificates and will have no limitation or comment made on the certificate regarding color vision as they meet the standard for all classes. Applicants who take and pass only the OCVT during the day will be given an LOE valid only for third-class medical certificate.

An applicant who fails the SLT portion of the OCVT during daylight hours may repeat the test at night. Should the airman pass the SLT at night, the restriction:

### **NOT VALID FOR FLIGHT DURING DAYLIGHT HOURS BY COLOR SIGNAL CONTROL**

will be placed on the replacement medical certificate. The airman must have taken the daylight hours test first and failed prior to taking the night test.